SUREKEY EXAMINATIONS BOARD
PRE-PLE MAGIC SERIES (NAIROBI)
2024
MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	Random No.					Personal No.		

Candidate's Name: ....

Candidate's Signature: ....

School Name: ....

District Name: ....

Read the following instructions carefully:

1. Do not forget to write your **school** and **district name** on this paper.

2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions. The paper has **16 printed pages** altogether

3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.

4. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **not** be marked.

5. **No calculators** are allowed in the examination room.

6. Unnecessary **changes** in your work and handwriting that cannot easily be read may lead to loss of marks.

7. Do not fill anything in the table indicated: **"For Examiners' Use only"** and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn.No.	MARKS	EXR'S NO.
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

SECTION A: 40 MARKS
Answer **all** questions in this Section
Questions **1** to **20** carry two marks each

1.   Workout: 444 + 66.

2.   Write 1001010 in words.

        ....

        ....

3.   Use the Venn diagram below to find n(P U K)'
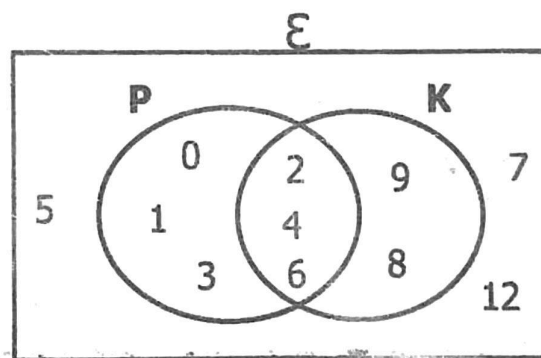
4.   Write the standard form of 34000.

5. If $x = 5$ and $4x + 2y = 38$, find the value of y.

6. The diagram below shows a regular polygon. Find the value of r.
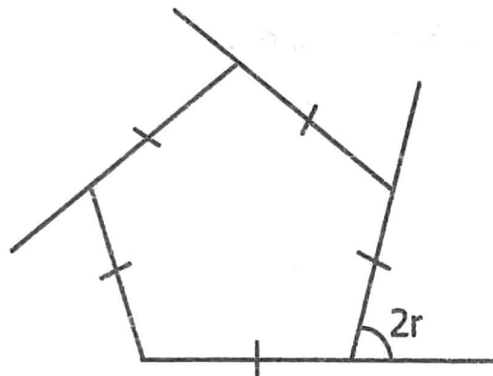
7. If 5 books cost Sh.30,000, calculate how many more books can be bought with Sh.48,000 at the same rate.

Turn Over

8.   At a forex bureau, one pound sterling (£) is bought at Ugsh 4,450 and sold at Ugsh 4,400. How much in Uganda Shillings did a tourist with £164 get?
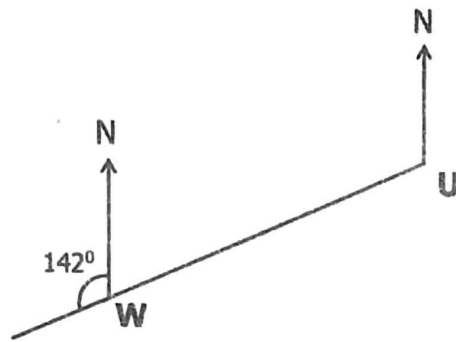
9.   Find the range of;   -2, 5, 0, -6 and 3.

10. A trader packed juice in 400ml bottles. How many bottles did he get from 6 litres of juice?

11. Using a pencil, a ruler and a pair of compasses only, construct an angle of 135° in the space provided below.

4

12.   Use the figure below to find the bearing of point **W** from point **U**.

N

N

U

142^0

W

13.   A taxi driver moving at a speed of 72km/h took 45 minutes on the way. Find the distance he covered.

14.   A school had 280 pupils last year. This year, the number decreased in the ratio of $\dfrac{3}{10} : \dfrac{2}{5}$. Find the new number of pupils in the school.

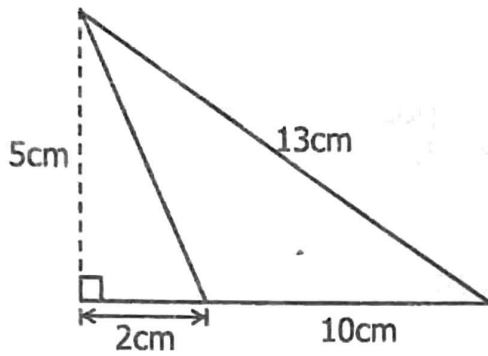**Turn Over**

15. Workout 3 x 4 (finite 7) using a dial.

16. Dennis borrowed Sh.160,000 from Barclays bank for 5 months at an interest rate of 6% per annum. How much interest will he pay?
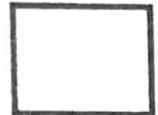
17. How many centimetres are in 0.84 metres?

18. Arrange $\frac{2}{5}$, $\frac{2}{3}$ and $\frac{1}{2}$ in an increasing order.

19. Find the area of the figure below.

20. The electricity transmission company planted twenty-one electricity poles in a straight line of distance 600metres. Find the gaps between the poles.
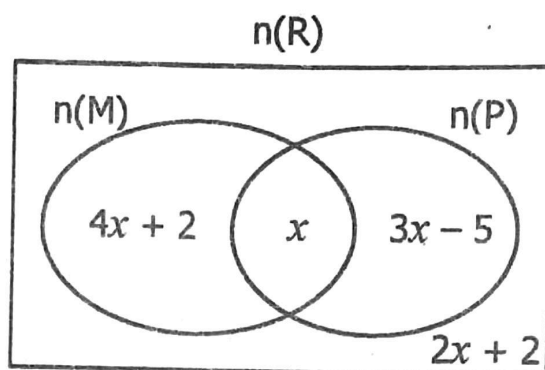
21.   The Venn diagram below shows P.7 pupils who like Rice (R), Posho (P) and Matooke (M). All the pupils like Rice.

(a)   If 14 pupils like only one type of food, find the value of x.

(02 Marks)

(b)   Find the total number of pupils in the class.

(02 Marks)

22. There are 162 girls in Jeneford Primary School, 46% of the pupils are boys. During their sports day, each pupil was given 2 apples. How many apples were given to the whole school? (04 Marks)
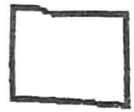
23. The median of 4 consecutive odd numbers is 30.

(a) Find the numbers. (03 Marks)

(b) Workout the sum of the largest and smallest number. (01 Mark)

Turn Over

24. A right-angled trapezium plot of land measures 11 metres and 17 metres along its two parallel sides. If its height is 8 metres;

   (a)   Find the length of its fourth side.   (02 Marks)

   (b)   Calculate;

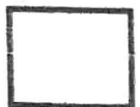   (i)   its perimeter.   (02 Marks)

        (j)   its area.   (02 Marks)

25. Given that $y = 2x + 2$, complete the table below. (04 Marks)

x	0	....	-2	....	3
y	2	4	....	-2	....

26. Arinaitwe is twice as old as Kasigazi. In 5 years time, their total age will will be 79 years.

    (a) How old is each now? (04 Marks)

    (b) How old will Kasigazi be in 7 years time? (01 Mark)

Turn Over

27. The table below shows Halimah's shopping bill.

(a) Complete the table correctly. (04 Marks)

Item	Quantity	Unit Cost	Amount
Soap	4 bars	Sh.3,650	Sh.14,600
Beans	3½kg	Sh....................	Sh.14,000
Sugar	..........grams	Sh.3,200 per kg	Sh.2,400
Rice	2kg	Sh.4,500	Sh....................
			Sh. ....

(b) Halimah paid Sh.38,000 for all the items. Calculate the percentage discount she was offered. (02 Marks)

28. (a) Add: 1 2 1three.   (02 Marks)
              + 2 2three

12

(b)   Given that $101_t = 1101_{three}$, find the value of the base
        represented by letter t.   (03 Marks)

29.   Mr. Okello spends $\frac{1}{4}$ of his salary on fees, $33\frac{1}{3}$ % on transport, $\frac{1}{6}$ on
        food and saves Sh.360,000.

        (a)   Find Mr. Okello's monthly salary.   (04 Marks)

        (b)   How much more money does he spend on fees than what he
                spends on food?   (02 Marks)

30. The figure below shows a rectangular metallic sheet measuring 20cm by 16cm. Circular pieces of diameter 3.5cm are to be cut out from it. Study it carefully and answer the questions that follow.

16cm

3.5cm

22cm
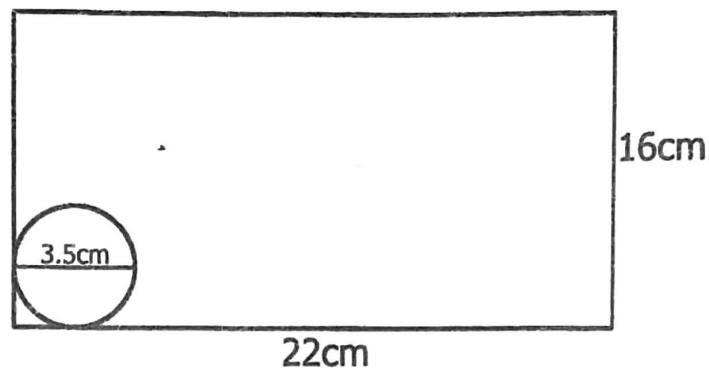
(a) Find the total number of circular pieces that can be cut out of the rectangular sheet. (02 Marks)

(b) Calculate the area of the unused metallic sheet. (Use π as $\frac{22}{7}$)
(03 Marks)

31. (a) Using a ruler, a pencil and a pair of compasses only, construct a rhombus **MNOP** where triangle **MNP** is an equilateral triangle of sides 7cm. (04 Marks)

(b) Measure length MO. .... (01 Mark)

Turn Over

32. Julian left town P at 8:00a.m and drove at 55km per hour for 2 hours to town Q. she rested for a half an hour at town Q. She left town Q and drove for 1½ hours covering 60km to town R, she rested for another one hour and then drove for 60 minutes to town T at a distance of 30km.

(a) Draw Julian's journey on the graph below.   (04 Marks)

TIME IN HOURS
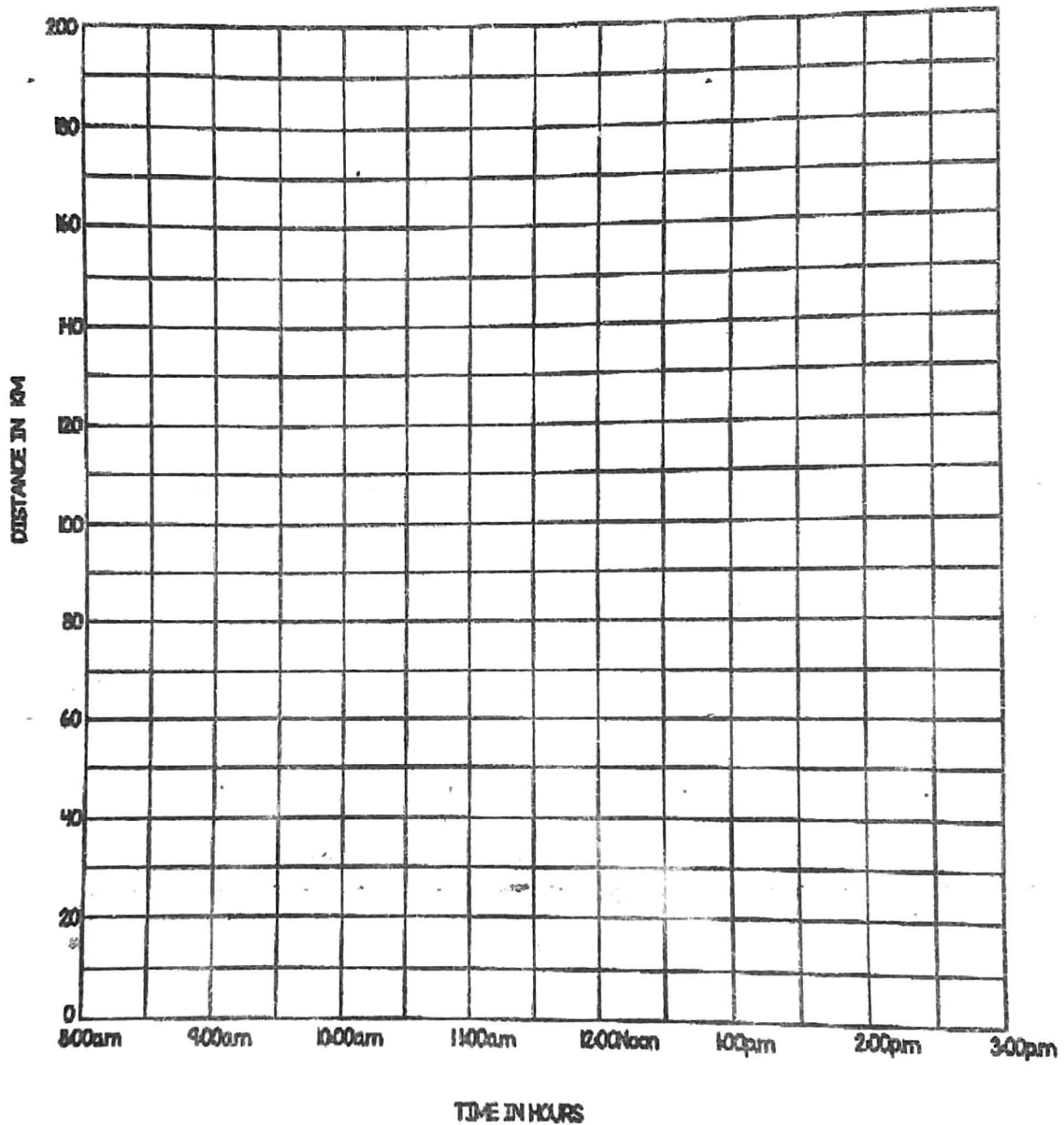
(a) Calculate her average speed for the whole journey.   (02 Marks)

END